

AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims, in which insertions are indicated by underlining and deletions are indicated by strikeouts or double bracketing.

1. (Currently amended) A method of repairing a nerve root avulsion between a peripheral nerve and the central nervous system in a living vertebrate, the method comprising
~~connecting bringing a first an avulsed end in the peripheral nerve and a second avulsed end close to a portion of the central nervous system through a pia incision each other without an intermediate graft, and~~
applying to the a connection gap between the first and second avulsed ends avulsed end in the peripheral nerve and the portion of the central nervous system a fibrin glue mixture as the only active agent, the fibrin glue mixture consisting of a growth factor, fibrinogen, aprotinin, and divalent calcium ions so that the fibrin glue mixture is simultaneously in contact with the connection between the two avulsed ends avulsed end in the peripheral nerve and the portion of the central nervous system to form an attachment between the avulsed ends them, wherein the first avulsed end is in the peripheral or central nervous system and the second avulsed end is in the peripheral nervous system.
2. (Currently amended) The method of claim 1, wherein the first avulsed end is in the peripheral nervous system and the second avulsed end is in portion of the central nervous system is at a nerve root.
3. (Original) The method of claim 1, wherein the growth factor is selected from the group consisting of a glial cell line-derived neurotrophic factor, transforming growth factor-beta, fibroblast growth factor, platelet-derived growth factor and epidermal growth factor, vascular endothelial growth factor, and neurotrophin.

4. (Currently amended) The method of claim 1, wherein the components of the fibrin glue mixture can be applied to the gap simultaneously or separately.

5. (Original) The method of claim 3, wherein the growth factor is fibroblast growth factor, which is acidic or basic fibroblast growth factor.

6. (Original) The method of claim 5, wherein the fibroblast growth factor is acidic fibroblast growth factor.

7. (Original) The method of claim 1, wherein the divalent calcium ions are provided by the addition of calcium chloride or calcium carbonate.

8. (Previously presented) The method of claim 1, wherein the fibrin glue mixture consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

9. (Previously presented) The method of claim 1, wherein the fibrin glue mixture consists of acidic fibroblast growth factor, fibrinogen, aprotinin and calcium chloride.

10. (Previously presented) The method of claim 9, wherein the fibrin glue mixture consists of 0.0001-1000 mg/ml of fibroblast growth factor, 10-1000 mg/ml of fibrinogen, 10-500 KIU/ml of aprotinin, and 1-100 mM of calcium chloride.

11. (Previously presented) The method of claim 10, wherein the fibrin glue mixture consists of 1 mg/ml of fibroblast growth factor, 100 mg/ml of fibrinogen, 200 KIU/ml of aprotinin, and 8 mM of calcium chloride.

12. (Currently amended) A method of reconnecting an avulsed end of a cervical root an intercostal nerve to a cervical root of an avulsed end of the a spinal cord in a living vertebrate, comprising

bringing the avulsed end of the cervical root intercostal nerve into close to the cervical root of avulsed end of the spinal cord through a pia incision without an intermediate graft, and

applying to the cervical root of the spinal cord and gap between the two avulsed ends of the intercostal nerve a fibrin glue mixture as the only active agent, the fibrin glue mixture consisting of a growth factor, fibrinogen, aprotinin, and divalent calcium ions so that the fibrin glue mixture is simultaneously in contact with the avulsed end of the intercostal nerve cervical root and avulsed end of the cervical root of the spinal cord to form an attachment between the cervical root and the spinal cord of said vertebrate.

13. (Original) The method of claim 12, wherein the growth factor is selected from the group consisting of a glial cell line-derived neurotrophic factor, transforming growth factor-beta, fibroblast growth factor, platelet-derived growth factor and epidermal growth factor, vascular endothelial growth factor, and neurotrophin.

14. (Currently amended) The method of claim 12, wherein ~~the~~ components of the fibrin glue mixture can be applied to the gap simultaneously or separately.

15. (Original) The method of claim 13, wherein the growth factor is fibroblast growth factor, which is acidic or basic fibroblast growth factor.

16. (Original) The method of claim 15, wherein the fibroblast growth factor is acidic fibroblast growth factor.

17. (Original) The method of claim 12, wherein the divalent calcium ions are provided by the addition of calcium chloride or calcium carbonate.

18. (Previously presented) The method of claim 12, wherein the fibrin glue mixture consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

19. (Previously presented) The method of claim 12, wherein the fibrin glue mixture consists of acidic fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

20. (Previously presented) The method of claim 19, wherein the fibrin glue mixture consists of 0.0001-1000 mg/ml of fibroblast growth factor, 10-1000 mg/ml of fibrinogen, 10-500 KIU/ml of aprotinin, and 1-100 mM of calcium chloride.

21. (Previously presented) The method of claim 20, wherein the fibrin glue mixture consists of 1 mg/ml of fibroblast growth factor, 100 mg/ml of fibrinogen, 200 KIU/ml of aprotinin, and 8 mM of calcium chloride.

22-33 (Canceled).

35. 34. (Currently amended) The method of claim 1, further comprising suturing or anastomosing anastomosing the other end of the peripheral nerve to a cervical root the first and second avulsed ends.

36. 35. (Currently amended) The method of claim [[35]] 34, wherein the fibrin mixture consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.

37. 36. (Currently amended) The method of claim 12, further comprising suturing or anastomosing anastomosing the other end of the intercostal nerve to a cervical root and the avulsed end of the spinal cord.

38. 37. (Currently amended) The method of claim [[37]] 36, wherein the fibrin mixture consists of fibroblast growth factor, fibrinogen, aprotinin, and calcium chloride.